

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by reciting that the microparticle system is added --in a retention aid effective amount (1)--, thus rendering the term “used as a retention aid” redundant, which term has thus been deleted.

New Claim 10 has been added, to highlight the improvement obtained with the present invention herein, i.e., that adding all of the microparticle system after the last shearing stage before a head box saves on the amount of material necessary to provide the same or substantially the same retention when adding polymer before the last shearing stage, as supported, for example, in the Examples herein, at page 7, line 1 through the end of page 8, of the specification.

No new matter is believed to have been added by the above amendment. Claims 1-10 are now pending in the application.

REMARKS

Applicants thank the Examiner and the Examiner's supervisor for the courtesy extended to Applicants' attorney during the interview held May 4, 2006, in the above-identified application. During the interview, Applicants' attorney explained the presently-claimed invention and why it is patentable over the applied prior art. The discussion is summarized and expanded upon below.

As Applicants' attorney noted during the above-referenced interview, the present invention is based on a discovery that when a particular cationic polymer having a particular molecular weight and a particular charge density is used in a microparticle system functioning as a retention aid in papermaking, and the microparticle system is free of polymers having a charge density of more than 4 meq/g, less microparticle system is necessary for a given amount of retention if the microparticle system is added after the last shearing stage before a head box. The applied prior art does not recognize this discovery.

The rejections of Claims 1 and 3-8 under 35 U.S.C. § 102(b) as anticipated by, and of Claims 2 and 9 under 35 U.S.C. § 103(a) as unpatentable over, U.S. 5,529,699 (Kuo et al), are respectfully traversed.

Kuo et al discloses water soluble cationic copolymers for various functions, such as part of retention and drainage aids for use in papermaking systems, which cationic copolymers have molecular weights from 3,000 to 4 million, but due to solubility and handling considerations, preferably within a range of from 10,000 to 2 million (column 8, lines 24-30), and a charge density in the range of 1 to 24 meq/g, preferably 4 to 22 meq/g, most preferably 10 to 20 meq/g as determined at pH 4 (column 11, lines 14-18), which copolymers may be used with, *inter alia*, microparticles such as bentonite (paragraph bridging columns 9 and 10), and which copolymers and microparticles may be added to an aqueous pulp suspension "in any order and at any point in the papermaking process prior to

the head box, either before or after one of the several shear stages, with best results achieved when the copolymer is added to thin stock rather than to thick stock, and **the microparticle solution is preferably added after the copolymer solution**. Typically, both components are added close to the head box prior to sheet formation (column 10, lines 43-53; emphasis added).

The Examiner finds that the above features “overlap and thus anticipate” the presently-claimed invention.

As stated in *In re Arkley*, 455 F.2d 586, 590, 172 USPQ 524, 526 (CCPA 1972) (**copy enclosed**):

[R]ejections under 35 U.S.C. 102 are proper only when the claimed subject matter is identically disclosed or described in “the prior art.” Thus, for the instant rejection under 35 U.S.C. [102(b)] to have been proper, the . . . reference must clearly and unequivocally disclose the claimed [subject matter] or direct those skilled in the art to the [subject matter] without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. Such picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the similarity of the subject matter which he claims to the prior art, but it has no place in the making of a 102, anticipation rejection.

Kuo et al does not satisfy the *Arkley* test, on many levels. The kind of picking and choosing discussed in *Arkley* would, at a minimum, be required herein. More significantly, the present claims require that **no** polymer having a charge density more than 4 meq/g be present. Yet Kuo et al, on the other hand, most prefer that their polymer have a charge density of from 10 to 20 meq/g. Nor does Kuo et al’s disclosure of the end point “1” meq/g constitute an anticipation because it is not more than 4 meq/g. Thus, at best, Kuo et al is available under 35 U.S.C. § 103(a) only. But even if so available, there is no motivation to eliminate all polymers with a charge density more than 4 meq/g in Kuo et al when Kuo et al’s preferred copolymers have such a charge density. In addition, Kuo et al prefers adding the copolymer **before** the microparticle, which is consistent with the order in the Comparative

Examples herein, discussed below. Indeed, one of ordinary skill in the art reading Kuo et al would not appreciate or predict the significance of the results obtained in the saving of retention aid materials when the presently-claimed invention is carried out. Such saving is demonstrated by the comparative data of record. By comparing Example 1 with Comparative Example 1, described in the specification at page 7, line 9ff, it is seen that by adding the cationic polyacrylamide after the last shearing stage, rather than earlier, saving of polymer was 30% and saving of bentonite was 10% for substantially the same FP and FPA retention, while the improvement in drainage over a wire was about 10%. Similar results were obtained, as can be ascertained by comparing Example 2 with Comparative Example 2, described in the specification beginning at page 7, line 41. Finally, and as Applicants' attorney noted during the above-referenced interview, the description of "close to the head box prior to sheet formation" in Kuo et al is unclear in the sense that it is not necessarily synonymous with "after the last shearing stage" and any finding that they are synonymous is inconsistent with the previous sentence in Kuo et al's disclosure of adding the copolymer before the microparticle.

For all the above reasons, it is respectfully requested that the rejections over Kuo et al be withdrawn.

The rejection of Claims 1-9 under 35 U.S.C. § 103(a) as unpatentable over U.S. 6,379,501 (Zhang et al) in view of Kuo et al, is respectfully traversed. Zhang et al is drawn to a process of papermaking, which involves substantially simultaneously or sequentially adding to a cellulose slurry at least one aluminum compound and at least one water-soluble silicate (column 2, lines 56-59). Zhang et al discloses further the addition of additives to the slurry, such as flocculants and other retention aid materials (column 13, lines 1-8); such a flocculant is a cationic polymer having a potential charge density of preferably 0.1 to 4 meq/g (column 13, lines 63-65). The Examiner finds that the above-discussed silicate meets the

terms of the presently-recited finely divided inorganic component. In addition, while the Examiner finds that Zhang et al does not disclose that the cationic polymer and (and other additives) are added after the last shear stage and before the head box, Zhang et al discloses that their additive, which includes the cationic polymer flocculant, is preferably added to the paper stock **before** the last shearing stage, while the aluminum and silicate compounds are added after the last shearing stage, but prior to the head box (column 13, lines 13-26). Thus, Zhang et al explicitly discloses that their flocculant, such as their cationic polymer, is added preferably before the last shearing stage.

The disclosures and deficiencies of Kuo et al have been discussed above. Kuo et al does not remedy Zhang et al because Kuo et al would not cause one skilled in the art to alter the time of addition of the flocculant and other retention aid additives of Zhang et al. Indeed, both references direct persons skilled in the art to add a cationic polymer before the last shearing stage.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Customer Number

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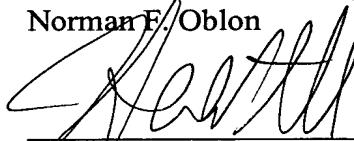
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**FULL TEXT OF CASES (USPQ FIRST SERIES)**

*In re Arkley, Eardley, and Long, 172 USPQ 524 (CCPA 1972)*

**In re Arkley, Eardley, and Long**

**(CCPA)**

**172 USPQ 524**

**Decided Feb. 17, 1972**

**No. 8553**

**U.S. Court of Customs and Patent Appeals**

**Headnotes**

**PATENTS**

**1. Patentability - Anticipation - In general (§ 51.201)**

**Patentability - Invention - In general (§ 51.501)**

Fact that rejections under 35 U.S.C. 103 are proper where subject matter claimed "is not identically disclosed or described" in prior art indicates that rejections under section 102 are proper only when claimed subject matter is identically disclosed or described in prior art.

**2. Court of Customs and Patent Appeals - In general (§ 28.01)**

Court does not grant patent where it reverses rejection of claim; it is Patent Office which grants patents, not the court.

**3. Court of Customs and Patent Appeals - In general (§ 28.01)**

**Pleading and practice in Patent Office - Rejections (§ 54.7)**

Court's reversal of rejection of claim on ground that it is anticipated by reference under 35 U.S.C. 102 leaves Patent Office free to reject claim as obvious under section 103 in view of reference since such latter rejection was not before court.

**4. Court of Customs and Patent Appeals - Weight given decisions below (§ 28.35)**

It is not court's practice to apply a different standard in cases in complex areas of technology than it does in easily understood cases.

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**Particular patents-Cephaloridine**

Arkley, Eardley, and Long, Cephaloridine, rejection of claim 30 reversed.

**Case History and Disposition:**

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**Appeal from Board of Appeals of the Patent Office.**

**Application for patent of Vincent Arkley, Stephen Eardley, and Alan Gibson Long, Serial No. 329,212, filed Dec. 9, 1963; Patent Office Group 120. From decision rejecting claim 30, applicants appeal. Reversed; Baldwin, Judge, concurring with opinion in which**

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**Almond, Judge, joins; Worley, Chief Judge, dissenting with opinion.**

**Attorneys:**

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**S. Wm. Cochran (Jack E. Armore and Henry Willard Tarring II of counsel) for Commissioner of Patents.**

**Judge:**

Before Worley, Chief Judge, and Rich, Almond, Baldwin, and Lane, Associate Judges.

**Opinion Text****Opinion By:**

**Rich, Judge.**

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claim 30 in appellants' application serial No. 329,212, filed December 9, 1963, for a cephalosporin-type antibiotic known as cephaloridine. No claim has been allowed. We reverse.

**The Subject Matter Claimed**

The appealed claim is drawn to a single compound, by structural formula, and reads:

30. A compound of the formula

*Graphic material consisting of a chemical formula or diagram set at this point is not available. See text in hard copy or call BNA PLUS at 1-800-452-7773 or 202-452-4323.*

This compound is said to be a broad spectrum antibiotic, effective against both gram-positive and gram-negative micro-organisms, and to possess many other virtues not relevant here because of the nature of the rejection.

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## The Rejection

Appellants' claim has been rejected as *anticipated* by U. S. patent No. 3,218,318, issued to Edwin H. Flynn November 16, 1965, on an application filed in the United States August 31, 1962, and available against appellants' application by virtue of 35 U.S.C. 102(e) as of its filing date. This reference discloses generically a class of cephalosporin-type compounds having the following structural formula:

*Graphic material consisting of a chemical formula or diagram set at this point is not available. See text in hard copy or call BNA PLUS at 1-800-452-7773 or 202-452-4323.*

in which R<sub>1</sub>, taken alone, is -OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, or tertiary-amino, R<sub>2</sub> is -OH when R<sub>1</sub> is -OH, R<sub>2</sub> is -OH when R<sub>1</sub> is C<sub>1</sub>-C<sub>6</sub> alkoxy, R<sub>2</sub> is -O- when R<sub>1</sub> is tertiary-amino, R<sub>1</sub> and R<sub>2</sub>, when taken together, are -O-, n is zero or 1, R<sub>3</sub> is C<sub>1</sub>-C<sub>6</sub> alkylene, and R<sub>4</sub> is a heteromonocyclic radical containing O, S, and/or N. Appellants "conservatively" estimate that over 230,000 compounds (including, concededly, theirs) are embraced within this generic disclosure, and the board in turn conceded that, "If this were the only anticipatory disclosure in the reference," the disclosure would be "too diffuse" to support a 102 rejection.

However, the board found: (1) that Flynn's examples 4 and 10 "adequately disclose the exact precursors of the presently claimed compound"; (2) that Flynn's statement that

Cephalosporin C is also readily converted into compounds of the cephalosporin C<sub>A</sub>

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type by refluxing in aqueous solution with an excess of pyridine, for example, as described in Belgian Patent 593,777.

was adequate to teach how to convert the C-type precursors disclosed in examples 4 and 10 to the C<sub>A</sub>-type compound claimed by appellants; and (3) that Flynn's statement that, "in general, those compounds which possess the cephalosporin C<sub>A</sub> nucleus are more effective antibacterially than those containing the cephalosporin C nucleus" provided the "motive \* \* \* to follow this additional teaching \* \* \*." Putting these three findings together, the board held that

The indicated combination of Example 4 or 10 with \* \* \* [the teaching of how to convert "Cephalosporin C \* \* \* into compounds of the cephalosporin C<sub>A</sub> type"] is not a matter of obviousness within the meaning of 35 U.S.C. 103 but of direct teaching within the four corners of the patent.

The effect of this holding, of course, was that the board did not have to look at the extensive objective evidence which appellants had offered to rebut any inference of obviousness which might be thought to arise from the teachings of the Flynn patent.

## Opinion

[1] The sole issue in this case is whether cephaloridine is "described" in the Flynn patent within the meaning of that word in 35 U.S.C. 102(e).<sup>1</sup> It is to be noted that rejections under 35 U.S.C. 103 are proper where the subject matter claimed "is not *identically* disclosed or described" (emphasis ours) in "the prior art," indicating that rejections under 35 U.S.C. 102 are proper only when the claimed subject matter *is* identically disclosed or described in "the prior art." Thus, for the instant rejection under 35 U.S.C. 102(e) to have been proper, the Flynn reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. Such picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the *similarity* of the subject matter which he claims to the prior art, but it has no place in the making of a 102, anticipation rejection.

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In this case we have no difficulty in deciding that the portions of the Flynn reference relied upon by the Patent Office do not identically describe the claimed subject matter. As appellants point out, the compounds of Flynn's examples 4 and 10 are the "exact precursors" of appellants' compound "only to the extent that appellants have discovered that cephaloridine will be formed *if* the acid [disclosed in example 10] is first selected and *then* carefully reacted with a particular tertiary amine *which also must be selected*." (Emphasis in original.) Of course, it does appear that the "particular tertiary amine" to which appellants refer is pyridine, which is mentioned elsewhere in Flynn as an example of the class of reactants <sup>2</sup> with which a particular cephalosporin C-type compound (namely, cephalosporin C itself) may be converted into compounds of the cephalosporin C  $\Delta$ -type, but there is nothing in the teachings relied upon by the Patent Office which "clearly and unequivocally" directs those skilled in the art to make this selection nor any indication that Flynn ever made the selection himself. Similarly, while it is reasonable to suppose that Flynn's teaching that "in general, those compounds which possess the cephalosporin C  $\Delta$ -nucleus are more effective antibacterially than those

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containing the cephalosporin C nucleus" would provide some "motive" for those that followed him to concentrate their investigations on compounds possessing the cephalosporin C  $\Delta$ -nucleus, that motivation is a very general one, pointing to no particular one of the myriads of compounds, actual and potential, containing the cephalosporin C  $\Delta$ -nucleus.

The board, apparently recognizing the weakness of its position in attempting to arrive at an anticipation by combining the disclosures in examples 4 and 10 with the above-quoted teaching elsewhere in the patent of how to convert a particular, different cephalosporin C-type compound into cephalosporin C  $\Delta$ -type compounds, postulates certain teachings which might have been in the reference patent any one of which, according to it, if present would have removed all doubt concerning the completeness of the anticipation. <sup>3</sup> The simple answer to the board's argument is that these teachings were not contained in the Flynn patent and that we do not regard the teachings which were there and which *were* relied upon below as the equivalent of those which were postulated by the board. We do not read into references things that are not there.

Although the board declined to discuss four relatively recent decisions by this court in cases involving description requirements in various sections of the patent statute <sup>4</sup> on the ground that "the issue [of anticipation] is essentially a factual one," it did consider the older case of *In re Armstrong*, 47 CCPA 1084, 280 F.2d 132, 126 USPQ 281 (1960), to be "apposite on this point." There this court reversed the board, finding support for process claims reciting the use of sodium carbonate although the example in the specification advanced as support for the claims used sodium hydroxide. However, in the first place, the *Armstrong* case was decided well before the line of cases beginning with *Ruschig II*, supra, <sup>5</sup> which have significantly tightened up on the application of the description requirement in the first paragraph of 35 U.S.C. 112, and, in the second place, the opinion in *Armstrong* points out that appellants' specification stated that alkali hydroxides and alkali carbonates could be used "interchangeably" in their process. The opinion stresses this equivalency, which involved a tiny number of variables in comparison to the situation here. There are no equivalent "blaze marks," to quote the language of *Ruschig II*, in the case at hand.

Accordingly, we will not sustain the rejection on the ground on which it was made. Concerning the rejection as it is reformulated by the dissent, we express no opinion. It may be that the Patent Office *should* have relied upon the portions of Flynn on which the dissent relies, or it may be that they had very good reasons for not doing so. In any event, they did *not* rely on those teachings in Flynn, and appellants have therefore had no opportunity to comment thereon. We do not conceive that it is part of our duty to make better rejections for the Patent Office, even if we could be sure that we really were making a "better rejection," nor do we think that it would be consistent with the requirements of due process for us to do so for the first time on appeal, without notice to the affected party.

[2] Furthermore, we point out that we are not granting appellants a patent, if that is what the dissent means by "bestowing on the applicants a license to litigate." We are simply reversing a rejection on the ground that the claim on appeal is *anticipated* under § 102 by Flynn. It may well be that it is unpatentable because *obvious* under § 103 in view of Flynn,

[3] but no such rejection is before us. The Patent Office is free to make such a rejection after our decision in this case should it think it appropriate. In *re* Ruschig, 54 CCPA 1551, 379 F.2d 990, 154 USPQ 118 (1967); and In *re* Fisher, 58 CCPA —, 448 F.2d 1406, 171 USPQ 292 (1971). In any event, it is the Patent Office which grants patents, not this

[4] court. It may further be observed that

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it is not now the practice in this court, if it ever was, to apply a different standard in cases which are in "complex areas of technology" than we do in easily understood cases.

The decision of the board is *reversed*.

### Footnotes

Footnote 1. At one time appellants contended that Flynn was not an "enabling disclosure," In *re* LeGrice, 49 CCPA 1124, 301 F.2d 929, 133 USPQ 365 (1962), but we gather that they have abandoned that contention on appeal, although there is still an ambiguous reference to LeGrice in their briefs.

Footnote 2. The parties argue, in essence, about whether the words "for example" in the sentence "Cephalosporin C is also readily converted into compounds of the cephalosporin C<sub>A</sub> type by refluxing in aqueous solution with an excess of pyridine, for example, as described in Belgian Patent 593,777" refers to the word "pyridine" or the words "as described." Appellants argue that "it is to be stressed that pyridine is only being suggested as an *example* of the tertiary amine[s] suitable for the reaction with the prior art compound cephalosporin C," while the solicitor seems to be taking the position that Flynn's specification would be read as indicating that the Belgian patent was one place among many where those skilled in the art could learn how to react cephalosporin C with pyridine. While the matter is not free from doubt, we think it more likely that the sentence would be read in the former way because the presence of the word "type" after "C<sub>A</sub>" and not after "C" suggests that one particular C-type compound (namely, cephalosporin C itself) can be changed into *various* C<sub>A</sub>-type compounds by refluxing it with an excess of the proper reactant. This interpretation of the controverted sentence is reinforced by the next sentence in Flynn's specification, which is as follows:

The reaction is applicable in general to the tertiary amines, of which numerous examples are given above, yielding corresponding derivatives of the cephalosporin C<sub>A</sub> type wherein the tertiary amine is attached to the methyl group in the 3 position of the thiazine ring, and forms an inner salt with the carboxyl group in the 4 position.

Footnote 3. These postulations were contained in the following passage from the board's opinion:

There would be no doubt of the completeness of the anticipation if, paraphrasing column 3, lines 47 to 50, the following language were present at the end of each of Examples 4 and 10:

"This compound is also readily converted into a compound of the cephalosporin C<sub>A</sub> type by refluxing in aqueous solution with an excess of pyridine, for example, as described in Belgian Patent 593,777."

Likewise, there would be no question of the applicability of column 3, lines 47 to 50, if that sentence were introduced by the words "Any one of the compounds of Examples 1 to 15 is also readily converted into

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compounds of the C<sub>A</sub> type \* \* \*" or "Any one of the herein specifically named cephalosporin C compounds is also readily converted into compounds of the C<sub>A</sub> type \* \* \*."

Footnote 4. In re Ruschig, 52 CCPA 1238, 343 F.2d 965, 145 USPQ 274 (1965); In re Kalm, 54 CCPA 1466, 378 F.2d 959, 154 USPQ 10 (1967); In re McLamore, 54 CCPA 1544, 379 F.2d 985, 154 USPQ 114 (1967); and In re Ruschig, 54 CCPA 1551, 379 F.2d 990, 154 USPQ 118 (1967) (Ruschig II).

Footnote 5. Among the most recent of these are In re Ahlbrecht, 58 CCPA 848, 435 F.2d 908, 911, 168 USPQ 293, 296 (1971); In re Lukach, 58 CCPA 1233, 442 F.2d 967, 969, 169 USPQ 795, 796 (1971); and Fields v. Conover, 58 CCPA 1366, 443 F.2d 1386, 1391-92, 170 USPQ 276, 279-80 (1971).

### Concurring Opinion Text

#### Concur By:

Baldwin, Judge, concurring, with whom Almond, Judge, joins.

While I agree that the disclosure in the Flynn patent is insufficient to constitute an anticipation of the claimed invention, I cannot agree with the language of the principal opinion that for the rejection based on an anticipation to have been proper, "the Flynn reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference."

The test which determines whether an invention has been anticipated by a reference is whether the description of the invention in the reference is "sufficient to put the public in possession of the invention." In re LeGrice, 49 CCPA 1124, 1131, 301 F.2d 929, 933, 133 USPQ 365, 369 (1962), citing Curtis on Patents, 3d ed., Sec. 378 and Seymore v. Osborne, 78 U.S. (11 Wall.) 516, 555 (1870). See also In re Brown, 51 CCPA 1254, 329 F.2d 1006, 141 USPQ 245 (1964); In re Sheppard, 52 CCPA 859, 339 F.2d 238, 144 USPQ 42 (1964); In re Bird, 52 CCPA 1290, 344 F.2d 979, 145 USPQ 418 (1965); In re Borst, 52 CCPA 1398, 345 F.2d 851, 145 USPQ 554 (1965); In re Baranauckas, 55 CCPA 1204, 395 F.2d 805, 158 USPQ 24 (1968); In re Hoeksema, 55 CCPA 1493, 399 F.2d 269, 158 USPQ 596 (1968); In re Wilder, 57 CCPA 1314, 429 F.2d 447, 166 USPQ 545 (1970); and In re Moore, 58 CCPA 1341, 444 F.2d 572, 170 USPQ 260 (1971). I find it unreasonable to assume that Judge Rich and Judge Lane intend to overrule this long line of cases sub silentio. If what they intend is merely to rephrase the accepted test so as to simplify its application, they have missed the mark.

The language used in the principal opinion would not in fact simplify the determination of the suitability of a reference as an anticipation under 35 U.S.C. 102. That language requires the tribunal to analyze the teachings of a reference to determine which are equivocal and which are unequivocal. It must also be determined which disclosures are directly related to each other by the teachings of the reference, thus making picking and choosing proper, and which disclosures are only indirectly related, or are not related at all. This is no simpler than reading the reference as a whole and determining what it fairly teaches to one of ordinary skill in the art.

The more important difficulty with the position taken in the principal opinion is that it misdirects the inquiry. It directs the tribunal to analyze the structure of the reference rather than its content. The real question is not how logically the various disclosures in a reference are related to each other, it is rather *what the reference fairly teaches to one of ordinary skill in the art*, no matter how ineptly it does so. Of course, the more logically the reference is laid out the clearer will be its teachings and the easier will be the job of those who must interpret it. But the law requires us to determine whether the invention has been *identically* described, *not* whether it has been *logically* described by the reference.

The Flynn reference has been described in both the principal opinion and the dissent. I will therefore merely state what I would consider that reference fairly teaches to one of ordinary skill in the art. Flynn does disclose the cephalosporin C<sub>A</sub>-type precursor of the instantly claimed C<sub>A</sub>-type compound. The precursor is one of

approximately 38 C-type compounds specifically disclosed. Flynn teaches how C-type compounds can be converted to C<sub>C</sub>-type compounds by heating with water under acid conditions, or converted to C<sub>A</sub>-type compounds by refluxing in an aqueous solution with an excess of a tertiary amine. Pyridine is specifically referred to as an example of a tertiary amine which will work, but a list of over 15 other tertiary amines is given. With regard to antibacterial effect, Flynn discloses that C<sub>C</sub>-type compounds are not as good as C-type compounds, and C-type compounds are not as good as C<sub>A</sub>-type compounds. As pointed out by the dissent, Flynn considered the C<sub>C</sub>-type and C<sub>A</sub>-type analogues of the specifically disclosed C-type compounds to be some of the compounds "available in accordance with the present invention."

I would not place as much weight as the dissent does on Flynn's statement that the C<sub>C</sub>-type and C<sub>A</sub>-type analogues were considered within the scope of the invention. Such statements in the specification regarding the breadth of the invention are generally too speculative to be given great weight. In the instant case, all that statement does is focus some additional attention on C<sub>C</sub>-type compounds and C<sub>A</sub>-type compounds. In my view, that attention is not a significant addition to the disclosure, since Flynn's remarks regarding the antibacterial activity of the compounds are sufficient to emphasize the C<sub>A</sub>-type compounds as the most desirable. The difficulty is that Flynn gives 38 or so possible precursors and 15 or so tertiary amines which will react with those precursors to form C<sub>A</sub>-type

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compounds. The Flynn disclosure, considered as a whole, does not sufficiently direct one skilled in the art to the claimed compound.

I disagree with the principal opinion on one last point. The opinion seems to suggest that we violate due process whenever we consider portions of a reference not specifically mentioned by the examiner or the board. I know of no requirement that the examiner and the board must list the sentences in the reference upon which they rely, nor can I see any sense in imposing such a requirement. All of the disclosure of a reference must be considered for what it fairly teaches one of ordinary skill in the art. In *re Meinhardt*, 55 CCPA 1000, 1004, 392 F.2d 273, 276, 157 USPQ 270, 272 (1968). As Judge Smith aptly stated in *Meinhardt*:

[T]he board relied on the same [reference] as the examiner to sustain the rejection. Assuming *arguendo* that the board relied on a portion of the [reference] ignored by the examiner, this could not constitute a new ground of rejection in view of *In re Azorlosa*, 44 CCPA 826, 241 F.2d 939, 113 USPQ 156 (1957), which holds, in pertinent part, that it is proper for the court and necessarily, the board, to consider everything that a reference discloses.

In *re Meinhardt*, *supra*, 55 CCPA at 1008-09, 392 F.2d at 280, 157 USPQ at 275. See also *In re Halley*, 49 CCPA 793, 296 F.2d 774, 132 USPQ 16 (1961); *In re Van Mater*, 52 CCPA 1076, 341 F.2d 117, 144 USPQ 421 (1965).

## Dissenting Opinion Text

### Dissent By:

Worley, Chief Judge, dissenting.

I cannot agree with the majority that cephaloridine is not "described" in the Flynn patent in the sense of 35 U.S.C. 102(e).

It cannot be said, of course, that cephaloridine *per se* is *explicitly* named by Flynn, but a clear implicit description is sufficient. In *re Baranauckas*, 43 CCPA 727, 228 F.2d 413, 108 USPQ 226 (1955). Reference to the Flynn disclosure will establish, I submit, that such a description exists in the present instance.

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The principal opinion has set forth portions of the generic and more specific disclosure of Flynn relied on by the board. The class of cephalosporin compounds disclosed generically by Flynn may be divided into several groups, of which the groups designated as cephalosporin C type and cephalosporin C<sub>A</sub> type (cephaloridine is a C<sub>A</sub> type) are of particular interest here.<sup>1</sup> After observing that "in general, those compounds which possess the cephalosporin C<sub>A</sub> nucleus are more effective antibacterially than those containing the cephalosporin C nucleus," Flynn goes on to name and describe several specific compounds having the cephalosporin C nucleus:

The *following examples*, together with the [ 15 ] *operating examples* appearing hereinafter, will illustrate the types of compounds available *in accordance with the present invention*:

[There follows a list of 24 specific 7-acylamidocephalosporanic acids, i.e., cephalosporin C type compounds. As noted by the board, two of the 15 operating examples referred to, examples 4 and 10, describe the potassium and sodium salts of 7-(2 $\phi$ -thienyl-acetamido) cephalosporanic acid (the sodium salt is known commercially as "cephalothin"). Appellant reacts that particular cephalosporanic acid with the tertiary amine pyridine to obtain the claimed cephalosporin C<sub>A</sub> type compound, cephaloridine.]

and the like, *including the cephalosporin C<sub>A</sub> and cephalosporin C<sub>C</sub> analogues thereof*. [Emphasis supplied.]

There can be no doubt from the above disclosure that Flynn regarded the cephalosporin C<sub>A</sub> analogues of each of the mentioned cephalosporin C type compounds to form an integral part of his disclosed invention. In particular, it is evident that Flynn does explicitly disclose the cephalosporin C<sub>A</sub> analogues of Examples 4 and 10. As to how to obtain those C<sub>A</sub> analogues from cephalosporin C type compounds, he states that compounds of the cephalosporin C<sub>A</sub> class "can be obtained by applying to appropriate 7-acylamidocephalosporanic acids the conversion procedures of Belgian Patent 593,777." Flynn had earlier stated, as pointed out by the board and majority here just what those "conversion procedures" are, viz., that "Cephalosporin C is also readily converted into compounds of the cephalosporin C<sub>A</sub> type by refluxing in aqueous solution with an excess of *pyridine*, for example, as described in Belgian Patent 593,777." <sup>2</sup> [Emphasis supplied.]

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I think it is clear that Flynn directs one of ordinary skill in the art, who is interested in particular cephalosporin C<sub>A</sub> analogues of the 37 or so cephalosporin C type compounds Flynn specifically discloses, to prepare them by reacting the appropriate 7-acylamido cephalosporanic acid with the particular tertiaryamine pyridine. Following those instructions, one of ordinary skill in this art would easily prepare the C<sub>A</sub>(pyridine) analogue of the particular cephalosporin C type compound described in Examples 4 and 10, which analogue is cephaloridine. Each and every one of the C<sub>A</sub>(pyridine) analogues of that relatively small number of cephalosporin C compounds has been effectively, or implicitly, described by Flynn. To be sure, appellant is claiming only one of them, but it is no less described than any of the others.

From what has been said of Flynn, it should be evident that there is no need in this case for those skilled in the art to resort to picking and choosing various disclosures unrelated to each other by the reference teachings, as the principal opinion implies. On the contrary, the disclosures of cephalosporin C compounds, cephalosporin C<sub>A</sub> compounds, and how to make them are all interrelated by Flynn himself. It should also be evident that the reference itself contains the full equivalent of the board's "postulations", which are quoted in footnote 3 and later deprecated in the principal opinion. Finally, it should be evident that the rejection rationale as stated herein is substantially identical to-not a reformulation of-that expressed by the board.

The principal opinion also criticizes the board for reading into references "things that are not there." My difficulty with that position stems from its disregard for the "things"-or "blaze marks"-that *are* there. In my opinion, the majority is groping for reversible error where none exists. As far back as 40 years, and over the years since, it has been a firm principle that this court would not reverse decisions of the tribunals below in highly complex areas of technology unless manifest error was shown. See, e.g., *In re Wietzel*, 17 CCPA 1079, 39 F.2d 669, 5 USPQ 177 (1930); *In re Bertsch*, 30 CCPA 813, 132 F.2d 1014, 56 USPQ 379 (1942); *In re Stoll*, 34 CCPA 1058, 161 F.2d 241, 73 USPQ 440 (1947). Needless to say, such error has not been shown here.

Although the majority would undoubtedly disclaim the notion, I cannot help but feel that it is resolving doubt on the issue presented in favor of the applicants. In doing so, this court is not doing the applicants or the public any favor. Rather it is bestowing on the applicants a license to litigate of dubious validity at a time when, it is reliably estimated, 80% of contested patents are being held invalid in other federal courts. And the other sad result here is to take from the public that which is already theirs by imposing on them a monopoly that should not exist. Appellants have given the public nothing it had not already been given by Flynn. I would remind my colleagues that patents are not like party favors to be passed out at random. The enabling statutes established under the Constitution clearly require more than appellants have offered as a quid pro quo to the public in exchange for the monopoly the majority awards them.

I find no error in the board's decision, and would affirm.

### Footnotes

Footnote 1. For purposes here, cephalosporin C<sub>A</sub> type compounds differ from cephalosporin C type compounds in the R<sub>1</sub> substituent attached to the methyl group located at the 3 position of the basic cephalosporin (cephem) nucleus. The C<sub>A</sub> type compounds have a tertiary amine attached to that methyl group, where as the C type compounds have an acyloxy group so attached. See the formula and definitions under "The Rejection" portion of the principal opinion. Cephaloridine has a pyridine radical attached to the 3-methyl group.

Footnote 2. Belgian 593,777 does indeed disclose obtaining of "antibiotic substances which are transformation products of Cephalosporin C and are called Cephalosporin C<sub>A</sub> compounds" by "treatment of Cephalosporin C in aqueous solution with a weak, tertiary base, for example pyridine, collidine or quinoline. If pyridine is used, the antibiotic obtained is called Cephalosporin C<sub>A</sub>(pyridine)."

- End of Case -